

Ontario fish and wildlife Review

Vol. 15, No. 3-4, 1976





A is for Aylmer and the first of a series on places you will want to go — the wildlife management areas of Ontario.

Port Severn may be the scene of advances in fisheries management. Murray Townes explains.

Coon dogs come with hot, medium or cold noses. Paul Dreyer brings us up to date on coon hunting, an old tradition.



Marshall Field, guest author, brings us down to earth with a report on the northern bald eagle. Cover eagle by Dr. Donald Gunn of Oakville, guest photographer.

Back cover: Steve Williams of Frost Centre shows Mike Buss with Simcoe County students who learned a deer's daily food problem by collecting five pounds of browse material.

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The goal of the Ministry of Natural Resources is to provide opportunities for outdoor recreation and resource development for the continuous social and economic benefit of the people of Ontario, and to administer, protect and conserve public lands and waters.



Ministry of
Natural
Resources

Hon. Frank S. Miller
Minister

Dr. J. K. Reynolds
Deputy Minister

WILDLIFE MANAGEMENT AREAS

Many people, it seems, are not aware that for years the Ministry of Natural Resources has been acquiring land and entering into agreements with landowners to manage areas specifically for wildlife. Most of these areas, although heavily used by hunters on opening day, are not used to their potential during the remainder of the year.

Wildlife Management Areas have been set aside to provide wildlife-based recreation but they also play their part in preserving open space and flora and fauna. Wetlands, with their ability to produce a diversity of plants and animals and recreational opportunities, are the primary targets for acquisition.

There are 40 Wildlife Management Areas in southern Ontario. Fifteen are privately owned areas which are managed for hunting under extension agreements between landowners and the Ministry of Natural Resources. Three of these have been added in the past two years. Landowners receive government assistance in managing their land for wildlife and in return they allow public access to the wildlife resources on their properties.

The other 25 areas, which include five in provincial parks, are owned or co-operatively managed by the Crown. They are open to the public all year round for a variety of activities from wildlife viewing and hiking to berry picking and dog training. Hunting is permitted during open seasons but the number of hunters may be restricted to ensure a good quality hunting experience. Winter activities include snowshoeing, cross-country skiing and snowmobiling in some areas.

In wetlands, observation platforms and blinds have been built for hunting and viewing. Baited areas offer excellent opportunities for naturalists and photographers to get close to wetland wildlife. In some areas captive Canada goose flocks are kept for the public's year-round viewing pleasure.

Nest boxes and platforms have been erected for some species such as blue birds and great blue herons, and many shrubs have been planted to attract birds and other wildlife.

This issue of the Review introduces a pictorial series on Ontario's Wildlife Management Areas. A booklet which describes the areas, *Wildlife Management Areas in Ontario*, may be obtained free of charge by writing to the Ministry or calling at one of the Ministry's field offices.

We hope that more people will come to enjoy Ontario's Wildlife Management Areas. What more interesting and relaxing way to spend a Sunday afternoon than to hike through an area set aside and managed specially for wildlife. If you enjoy nature, is there any place you'd rather be?

INTROSPECT

*A personal opinion
not necessarily endorsed by
the Ministry of Natural Resources*

FLOUTING NATURE

*by A. A. Waino
Biologist, Maple District*

Do flood-control dams control floods? Huge dams are so massive and impressive that people rarely question their usefulness.

Science glories in investigations of the physical world and in the application of common sense to derive answers from the resultant data. The returns show that it may at times be impractical to attempt to stop or even to control floods with large dams.

It has been pointed out by agricultural scientists that simple, porous soil is the best water reservoir and flood control agency. This is the way Nature controls water runoff — she holds it where it falls.

At one experimental farm in the north-eastern United States, various types of agricultural lands received 8,000,000 gallons of water a day (rated at 500 inches of rain a year) but they failed to absorb it all. However, when the same amount was sprayed over the same area of forest, all the water was absorbed.

The common soil we walk on will hold more water than all the structures we can build on it.

Dams we can look at and boast about, but the simple underground reservoir of the soil is difficult to comprehend — we tend to believe only what we see.

Why do some people flout Nature? Perhaps, moving water is an affront to their egos. They can't leave rivers alone. They must do everything possible to stop them, slow them, divert them, or change their constitution.

Rivers teem with life and require a freedom of movement which should not be tampered with. Change a river drastically and the land begins to suffer.

As Elmer Peterson has stated in *Big Dam Foolishness* (1954), the refutations of large flood control dams add up to "one of the sharpest indictments ever handed down against a scheme of man".

The big dam holds much less water than a number of small detention reservoirs in headwater areas and it costs a lot more to build.

At some dam sites, the rich agricultural soils of the flood plains are inundated, and once flooded these lands are lost to food production. Such valuable productive areas we cannot afford to lose.

The rate of siltation in some large reservoirs is so rapid at times that the life expectancy of these flood control structures is only from 40 to 50 years. They are temporary structures and very expensive ones at that.

The advocates of big dams promote them as multiple-use structures for water supply, irrigation and recreation. The concept is questionable. Only an empty reservoir is capable of flood control.

Dam advocates say that dams are necessary to dilute pollution. Isn't this a rather medieval way to combat pollution? We should be striving to prevent pollutants from reaching rivers.

Large dams may raise the water table around the reservoirs, but their effect on the general water table is nil. A watershed program of detaining the water in the soil is the best way to raise water tables.

Big dams and their reservoirs are sometimes inhospitable to plant and animal life. They stop fish migrations, silt fish spawning beds, destroy aquatic vegetation, and may produce sterile or toxic bottom waters.

Extravagant costs, short life expectancy, continual evaporation, and the destruction of beautiful and productive river valleys are some of the regrettable trademarks of flood-control dams.

Future generations may wonder whatever prompted us to build structures so environmentally unsound. Let us spend money on reforestation and on the general rejuvenation of the plant cover of the land.

Nature has shown us how to control floods. Let us help her do it.

BEAVER BENEFIT WOOD DUCK

Our figures indicate a three-fold increase in the spectacular wood duck in the past seven years. The increase in woodland flooded by beaver, and the increased availability of dead trees providing natural nesting cavities, are probably the reasons for the woody's success.

— Owen Sound District



"Dogs are probably the most interesting part of raccoon hunting."

A LITTLE NIGHT MUSIC

*Report and Photos by Paul Dreyer
Conservation Officer, Huronia District*

PICTURE a crisp, still November night in Simcoe County. Two men are standing on a hill silhouetted against a full moon. Suddenly, from a dark ravine at the foot of the hill comes the deep baying of a hound which is quickly joined by a second, higher-pitched bark. The two cries intermingle and within seconds the wild music fills the ravine and echoes off the surrounding hills. On the hill the two "coon" hunters listen intently, each following and understanding the "talk" of his own dog.

No, we are not in the hills of Kentucky or the mountains of Tennessee. It's a southern Ontario raccoon hunt — an increasingly popular recreation pursued by a very dedicated group of people.

If you own a good dog and have a desire to stumble around the bush in the middle of the night, you are well on your way to becoming a coon hunter. The equipment needed is minimal. Since raccoon hunting takes place at night a flashlight is necessary, and most serious hunters use a headlight which

is worn on a hard hat much like the gear used by miners with a battery worn on the belt. The light has an adjustable dial and the beam can be changed from a floodlight for walking to a spotlight for shining up into trees.

Many hunters wear waders because of wet grass at night and the inevitable swamps and marshes that must be travelled.

A compass is a necessity. Following dogs through the bush in the middle of the night can get even the most experienced hunter lost. For those who cannot read a compass, a company in the United States manufactures a gadget that, when hooked up to a vehicle, makes the horn blow every 15 minutes so the hunter can find his way back to his car or truck.

A sharp skinning knife, .22 rifle and of course the necessary provincial hunting licences complete the outfit.

Most hunters have pick-up trucks with a dog box in the back. When they arrive in the hunting areas they try to park away



The raccoon is an interesting animal but a large population is a plague to farmers.



A good coon dog will tree his quarry and "talk" to his owner.



A total of 71,172 raccoon pelts were tanned or exported from Ontario in 1974-5 year.

from the roads so there is less chance of a dog getting hit by another vehicle.

Generally two or three dogs are released and the hunters wait for them to "strike" or "open" (barking to indicate that they smell a raccoon). When the dog finds a coon track, it will "give tongue" and start "working" or following the track.

Some hunters prefer a medium, or hot-nosed dog which will only follow very fresh scent. A cold-nosed dog will pick up and follow old scent and might spend several hours trying to unravel one track. A fresh track is much easier for the dog to work as there is more scent and the dog can move faster and usually tree the coon fairly quickly.

Young raccoons tree quickly, often climbing the first tree they come to, while adult coons are difficult to tree unless the dogs are close. Experienced hunters can often tell whether the dogs have treed a young or old coon by the sound of the chase. Adult raccoons, especially if they have been run before, will head for a hollow tree, brush pile, hole in the ground, tall hemlock, large bushy maple or sometimes an old barn. If a coon has a long enough head start it will probably escape.

A dog's ability to follow scent is affected by the weather. Experienced coon hunters say their dogs have trouble when there is heavy frost on the ground. During the summer, a warm, dry night is poor for hunting.

When the dog locates the tree climbed by the raccoon, it will stay at the base and begin "barking treed". Most hounds have a sort of "bawl" on track and change to a short fast bark when the coon is treed. From the change, a veteran hunter can tell when

his dog has a coon up a tree.

When the hunter reaches the tree, he shines his light on the raccoon and shoots it out of the tree. He skins it immediately and carries the hide with him in a bag or sack.

Dogs are probably the most interesting part of raccoon hunting. There are six breeds of treeing hounds that the United Kennel Club will register as coon hounds. The most popular is the treeing walker, followed by the bluetick, black and tan, English or red-tick, redbone and Plott. These dogs have been bred for their instinctive ability to tree (i.e. they are able to locate the tree which a coon has climbed and will stay there and continue barking until the hunter arrives). The ability to tree is the most important characteristic of a coon hound. Many hunters use grade dogs (unregistered) for coon hunting but the majority of coon hunters have registered dogs.

Raccoon populations annually produce surplus animals which can be harvested under proper hunting and trapping regulations. In many rural areas landowners, plagued with raccoons in corn fields, orchards, gardens and chicken pens, encourage local hunters to reduce populations as much as possible.

Raccoon fur is valuable with good pelts bringing about \$20 each at recent fur sales. Raccoon coats, long popular with the college crowd, are enjoying a new surge in popularity.

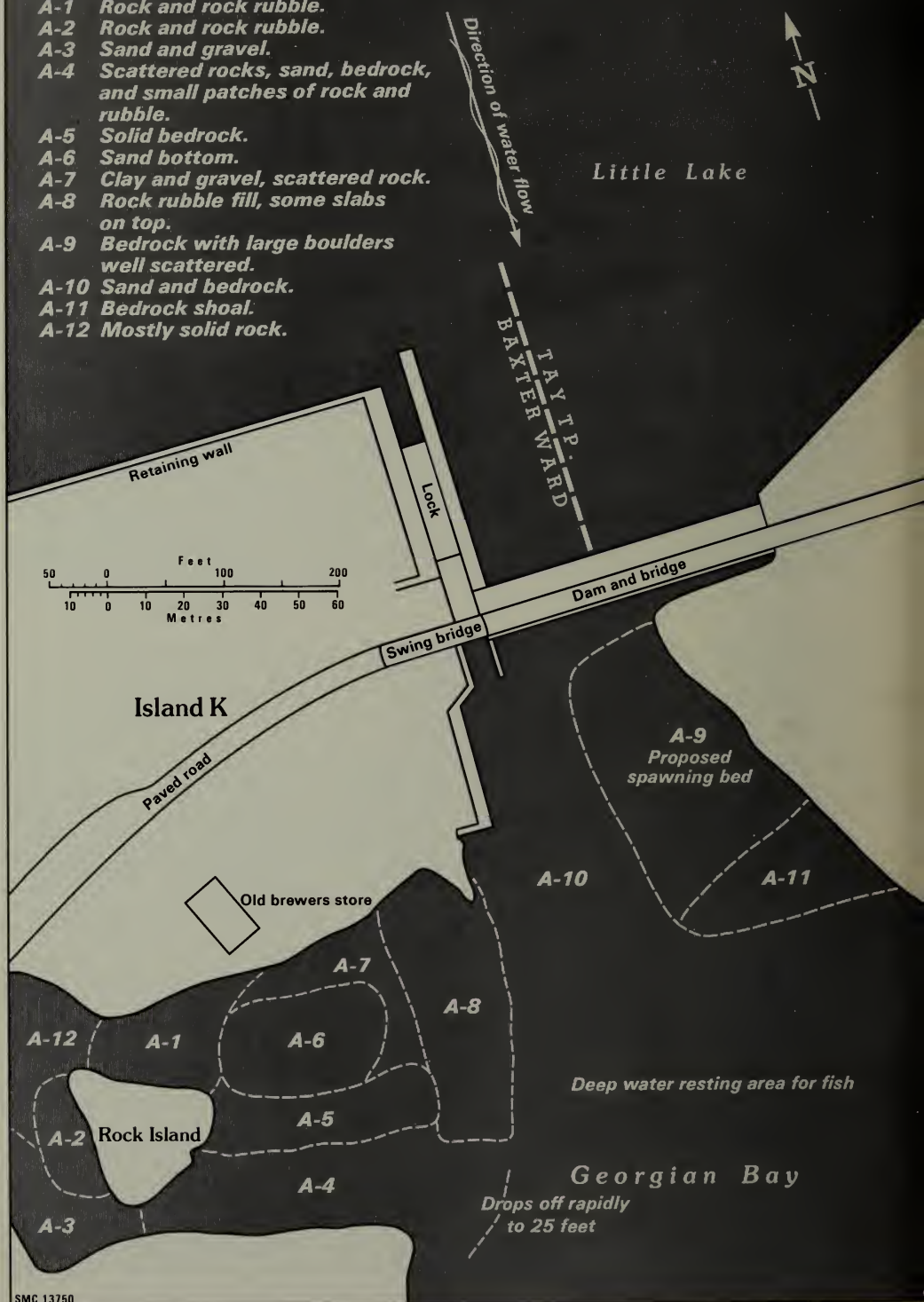
Raccoon meat, properly prepared, is a delicacy. It is common fare on hunters' tables and is slowly gaining recognition in wider circles.

Coon hunting is an old tradition in rural southern Ontario, providing recreation for hunters and a service to landowners.

BOTTOM TYPES AT PORT SEVERN

LEGEND

- A-1 Rock and rock rubble.
- A-2 Rock and rock rubble.
- A-3 Sand and gravel.
- A-4 Scattered rocks, sand, bedrock, and small patches of rock and rubble.
- A-5 Solid bedrock.
- A-6 Sand bottom.
- A-7 Clay and gravel, scattered rock.
- A-8 Rock rubble fill, some slabs on top.
- A-9 Bedrock with large boulders well scattered.
- A-10 Sand and bedrock.
- A-11 Bedrock shoal.
- A-12 Mostly solid rock.



SMC 13750



Murray Townes prepares to dive at Port Severn. Photos by A. J. Stewart.

NAVIGATION AND PROPAGATION

*by M. A. Townes
Conservation Officer, Huronia District*

EACH spring, with the coming of mild weather, the small community of Port Severn plays host to a large number of yellow pickerel (walleye) attracted to the gravel spawning beds in the fast, shallow waters near the locks. Many members of the public come to watch and enjoy this spectacular event. Ministry conservation officers are also on hand to protect the vulnerable fish from poachers.

Port Severn is the eastern terminus of the Trent-Severn Waterway where it enters Georgian Bay. Because of increased boating traffic on the canal, federal officials are considering new and larger locks or a new marine railway. Their construction might pose another threat to the fish, more dangerous than poachers, in that bulldozing, dredging, blasting and filling might destroy the valuable spawning beds. To obtain detailed information about the extent and quality of these spawning beds, it was decided to examine the area under water and make photographic records.

With the assistance of Conservation Officer Jim Kitchen and Monte Richardson,

a diving instructor, information was gathered over a three-year period beginning in 1973. A series of dives were made at different times of the year to map out and photograph the existing spawning beds. The equipment included a camera waterproofed in a plexiglass case.

The first dive was an eye-opener. Surface estimates of 140,000 square feet of spawning ground proved inaccurate when we found that only 10,000 square feet of the area had good egg-holding material. The remainder turned out to be sand, bedrock and clay. Clearly, any alteration to so small a spawning area would have serious effects on the survival of the walleye population.

Good walleye spawning beds consist of rock rubble, preferably fist-sized or a little larger. They should be located in fast running water that keeps the cracks and crevices among the rocks clean and well supplied with oxygen. When spawning is completed, the fertilized eggs fall between the rocks where they are protected from the swift current and predation by other fish.

The first step was to locate and map the



Main pickerel spawning grounds at Port Severn.

good spawning areas and draw a detailed map outlining the different bottom types. This was a time-consuming project because we were continually hampered by the swift current. However, as information accumulated, an interesting picture of the Port Severn spawning beds developed.

Surprisingly enough, one of the spawning areas (A-8) is man-made. It consists of waste rock dumped during the construction of the existing locks. Obviously, here is a lesson to be learned. Can a potential loss be turned into a gain? If future digging is controlled and selected construction material is placed in the right area, perhaps the size of the spawning area can be increased.

Towards this end, a plan was developed. The accompanying map indicates the location of the proposed bed (A-9), an area of 22,000 square feet under nine feet of water. Filling the area with five feet of good spawning material would provide a suitable water depth of four feet over the bed.

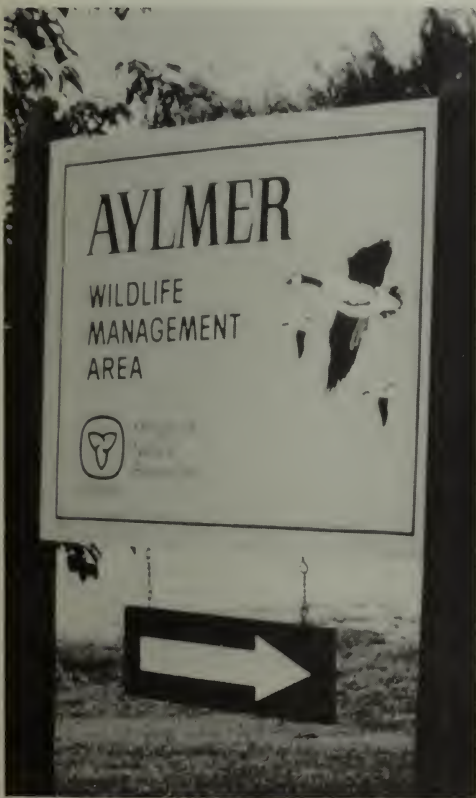
Fisheries and wildlife managers do their best to protect fish and wildlife values when new developments are proposed. In many cases the best we can do is compromise and get the best possible deal. The Port Severn area is a good example where careful study and planning can harmonize a new development with protection and even enhancement of a valuable fishing resource.

HYDRO PLANS INCLUDE FISHERIES

Ontario Hydro has retained the Ministry of Natural Resources to conduct fisheries investigations on Fourbass and Cooper Lakes. The study results will provide data for the Ministry to ensure that any changes to the Matabitchuan Generating Station will give adequate consideration to the fisheries resources in the lakes. — J. K Young, Temagami District



From the viewing stand at Aylmer, visitors may observe the American egret (shown above), great blue heron, black-crowned night heron, red-backed plover, greater and lesser yellow-legs, snowy owl, short-eared owl, red-tailed hawk, marsh hawk, American kestrel, meadow-lark, bobolink, horned lark, red-winged blackbird, mourning dove and many species of waterfowl. Photos by Robert Wenting.



AYLMER WILDLIFE MANAGEMENT AREA

The former RCAF training base near Aylmer now supports flyers of a different kind. Here in 1964 the former Department of Lands and Forests acquired 455 acres to manage for wildlife and provide recreational opportunities for the public.

About 140 acres are kept in agricultural production through share-cropping arrangements with local farmers who agree to grow corn on at least 40 per cent of the land and not plow more than 50 per cent of the land in the fall.

After the harvest, abundant corn remains on the ground to attract and sustain both local and migratory wildlife.

The Ministry's share of the harvested crops is used in wildlife feeding programs in Aylmer, Chatham and Simcoe Districts.

Aylmer District staff cultivate smaller plots of ground in the management area and raise corn, barley, buckwheat and winter wheat for on-site feeding programs.

Trees and shrubs have been planted on the margins of cultivated fields and in selected



Increasing numbers of waterfowl have been attracted to Aylmer Wildlife Management Area by feeding programs and the water impoundments created by diking. As many as 2,000 geese may be seen at one time. The number of ducks, staging in an evening flight, may exceed 25,000.



Wildlife are safe in the sanctuary, 100 acres of land and water surrounded by a chain-link fence six feet high. Canvasback, redhead, scaup and ring-necked ducks are common in spring while the fall migration brings large numbers of mallard and black duck and blue-winged and green-winged teal.



Long sloughs and two ponds, dotted with islands, provide 50 acres of water within the enclosure. Wildlife nest and rest in the shelter of aquatic vegetation and stands of willow, cattail and bulrush. Canada geese and mallard and shoveler ducks have nested in the sanctuary.



A captive flock of Canada geese was introduced in 1973 for breeding purposes, and migrating pairs have joined them to nest in the nesting area. When the goslings reach breeding age, they are moved to suitable habitats to establish breeding populations in southwestern Ontario.



areas. Mountain ash, highbush cranberry, autumn olive, Russian olive and multiflora rose provide cover and food for wildlife. Spruce and cedar have been established as windbreaks.

The Aylmer Wildlife Management Area has successfully demonstrated the compatibility of wildlife management with normal farming practices.

It offers visitors the opportunity to view, photograph and record waterfowl, shore birds, upland game birds, raptors, song birds and small mammals.

During the waterfowl hunting season, a limited number of hunters may use the pit blinds managed by the Ministry.

Aylmer Wildlife Management Area is located on Elgin County Road No. 32 three miles north of Aylmer. Enquiries may be addressed to:

District Manager
Ministry of Natural Resources
353 Talbot Street West
Aylmer, Ontario N5H 2S8
Telephone (519) 773-9241



A feature of the spring migration at Aylmer is the staging of whistling swans which may exceed 4,000 in number. They feed on waste

corn in the fields and rest at night in the protected sanctuary. They are easily disturbed but accept viewers in the viewing stand.



The cisco, commonly known as lake herring. Photo by F. P. Maher.

FISHING FOR FLAVOR — CISCO

by C. R. Jorgensen

Biologist, Lake Nipissing Fisheries Assessment Unit

THE cisco, *Coregonus artedii*, is commonly known as lake herring and it is also called tullibee, greyback tullibee, blueback and shallow-water cisco. In French it is cisco de lac.

The common cisco is laterally compressed. Its mouth is not overhung by the snout as in the whitefish and its eyes are large and silvery. The sides are silvery and the back varies from dark blue to a pale grey-green. The pectoral fins are clear while the pelvic and small fins are slightly white, and all three have traces of black on the tips.

Ciscoes bear a superficial resemblance to the true marine herrings but they are not close relatives.

At the spring break-up, ciscoes are distributed over the entire lake but they are somewhat more abundant in the shallower waters. In summer they cannot live in the warm shallows so they gradually move into deeper and cooler waters and they finally swim through the thermocline into the deep, cold region of the lake.

When ciscoes enter the cold region, they suffer from temperature shock and do not recover immediately. It is often three or

four weeks before they start to feed again. When the upper waters cool in the fall, the ciscoes swim up and disperse to all areas of the lake for the winter.

When the ice starts to form, cisco spawning is usually under way on sandy and gravelly shoals.

Ciscoes are most readily caught in fall and spring using such baits as mayflies, small live minnows, salted minnows and certain artificial lures. Flashy pearl buttons and small colored baits have proven to be successful. Through the summer, deep trolling with small spinners and still-fishing with various baits are effective.

Like the lake whitefish, the cisco is a good game fish for ice fishermen, and whitefish angling methods have been effective in some waters.

In general ciscoes can be prepared like whitefish so either filleting or scaling and gutting can be a prelude to a fine meal. The flesh is wholesome and delicious and especially tasty when pickled. It is a particularly good source of thiamine.

Fat ciscoes can be smoked successfully. Perhaps the best preparation is to split them

down the centre and gut them. Do not scale ciscoes as the skin and scales help to hold the fish together during smoking. Next, soak the pieces for 12 hours in a salt solution strong enough to float an egg. Drain them, and they are ready for smoking. Equipment can range from an old, converted refrigerator to a simple smoker that a camper can make from a cardboard box. Pieces thicker than one inch do not become thoroughly smoked, so the larger fish should be filleted.

THE CISCO COOKERY

Pickled Cisco

Ingredients: serving-size fillets, flour, salt, pepper and shortening or oil.

Roll fillets in flour seasoned with salt and pepper. Fry in fat until golden brown. Let cool.

In a saucepan put a cup of vinegar and a cup of water (quantities vary with the amount of fish) and bring to boil. Add a bay leaf and mixed pickling spice. Let cool.

Put fish in bowl or jar and pour the vinegar mixture over. This will keep for an indefinite time.

Sliced onions may be added.

Cisco Fillets

Fillet cisco and clean and rinse in water. Wrap in clean dish towel and sponge to remove excess water. Beat up eggs to batter.

Add salt, pepper and parsley flakes and stir well in camp pot. Put fillets in batter; then remove and daub both sides in ground corn flakes. Place in heated vegetable oil in frying pan in which a piece of garlic and onion have been sliced fine. Fry 3-4 fillets at a time until golden brown, turning while they fry. Good hot or cold.

Deep Fried Cisco

1 egg
½ tsp salt
1 cup milk (more if dry)
3 tsp baking powder
1 cup flour.

Beat egg, salt and milk with egg beater, add baking powder and flour and beat in.

Roll fresh cisco fillet in this batter and deep-fry.

In our survey of Lake Temiskaming, the maximum depth recorded so far is 700 feet which to our knowledge makes it the deepest inland lake in the Province.

— S. T. Fleming, Temagami

Mississagi Provincial Park has 50 miles of nature and hiking trails.

— C. J. Osborne, Blind River

STREAM IMPROVEMENT WORKSHOP

Two hundred members of the Ontario Federation of Anglers and Hunters met at Turkey Point Provincial Park on June 5 and took part in four stream improvement programs in the Normandale and Van Norman Fishing Areas. Spawning beds were cleared of silt with a fire pump, and five new spawning beds were created by placing two tons of gravel in the bed of the stream. The members were shown how to install an inexpensive but effective fish ladder in a small dam. The most dramatic project was the removal of hundreds of cans and bottles and other debris from Normandale Creek.

— H. J. Manson, Simcoe District

WORST FIRE YEAR

In Ontario's forest fire season, April 1 to October 31, 1976, a total of 1,290,500 acres was burned over in 3,945 forest fires, the highest number ever recorded and more than three times the annual average. Contributing factors were the severe drought in the northwest and numerous lightning storms which caused one-quarter of the fires. Many fires were held to an acre or less because at peak periods the Ministry of Natural Resources had more than 100 aircraft in operation for rapid fire detection and suppression.

WHITETAILS VS MOTORISTS

A total of 902 white-tailed deer were killed in collisions with motor vehicles in Ontario in 1975. Property damage was estimated at \$324,000. Most of the collisions occurred at night, and night drivers are advised to watch for the reflections from animal eyes, especially the reddish gleams usually reflected by deer eyes.



The lone bald eagle on Long Point Peninsula, perched on dead pine, centre, 1976.

OUR LAST FEW EAGLES IN THE SOUTH

by Marshall Field

Co-ordinator, Hawk Cliff Raptor Banding Station

THE northern bald eagle, *Haliaetus leucocephalus alascanus*, is staging a fight for survival in southwestern Ontario. The massive eagle nests, sometimes weighing up to a ton or more, have almost disappeared from the landscape.

Early literature indicates there was an eagle nest to almost every mile of Lake Erie shoreline and additional nests dotted along the larger streams and rivers. "Meet me at the eagle's nest" apparently was the origin of the name of the Elgin County Village of Eagle, situated on Highway No. 3, west of Wallacetown. In pioneer days, the landmark was an active bald eagle nest. As recently as ten years ago, there were still about a dozen nests visible on the Long Point Peninsula. Today we are hoping that one pair may be there.

The recent decline of the eagle population

is closely linked to the excessive use of certain types of pesticides. The eagle is a scavenger and consumes large quantities of dead fish. The fish contain high concentrations of organochlorine pesticides and other contaminants. When the contaminants build up to a high level in the fatty tissue of the eagles, one effect is a thin shell on bald eagle eggs, and reproduction is not successful because the eggs break. The behaviour of the parent birds is also affected and eventually they may not even attempt to breed.

To the best of our knowledge, there are only two pairs of nesting bald eagles in Elgin County. The last eaglet known to have fledged was recorded in 1969 and the following years have been unproductive. Concerned naturalists are wondering just how long the two pairs of eagles can survive



The natal nest of the last eaglet known to have fledged in Elgin County, 1969.

with the odds that are piling up against them.

In all of southwestern Ontario, including Pelee Island, there are probably no more than a half-dozen pair of nesting bald eagles. Five young appeared in 1975 but only one was produced in 1976. The Lake Erie population, including the birds along the Ohio shore, is the last inland population east of the Mississippi River and north of Florida. (Bald eagles are more common in northwestern Ontario.)

Shooting, deliberate or not, will always present a problem, but the major factor in the decline in eagle numbers is the chemical contamination of their environment and the loss of suitable habitat.

Bald eagles are protected under The Game and Fish Act and The Endangered Species Act. What can citizens do to help protect them? Report any incidents of shooting or nest molesting at once to the nearest office of the Ministry of Natural

Resources. It also helps to report any sightings of eagles.

An incubating eagle will leave the nest when humans approach. If it is prevented from returning for an extended period, the eggs will cool and the embryo may perish or be malformed. Early in the breeding season, a disturbance may cause a pair of eagles to abandon their nesting attempts. When an eagle nest is discovered, the property owner should be informed of his rare privilege and the importance of the nest.

Fortunately, many persons and conservation groups are actively involved in alleviating the plight of the species. Surely we can meet the challenge to protect and manage bald eagles and restore a portion of their former population in southwestern Ontario.

The rewards will be high if we can preserve for future generations the thrill of seeing a large, white-headed eagle gliding by the Lake Erie cliffs against the deep blue of an autumnal sky.

NECROPSY REPORT — MNR 41-76

by W. J. Moore

Wildlife Management Officer, Dryden District

EARLY in December, 1975, Ted Davis, an experienced trapper, came across the carcass of a female timber wolf on Lower Manitou Lake. Judging by the tracks in the snow, he thought the wolf had been killed the previous night by three other wolves.

When he reported his find to the Ministry of Natural Resources office in Dryden, the staff retrieved the animal and sent it to Fish and Wildlife Research Branch at Maple for a necropsy, a postmortem examination similar to an autopsy performed on humans.

The necropsy report, MNR 41-76, reads as follows:

"Examination of the carcass revealed one large cavity in the region of the mid and lower thorax and several small openings in the neck area. Except for the heart and lungs, the internal organs had been entirely consumed. The characteristics of the chewed ribs and appearance of the smaller openings suggested they were caused by small, or medium-sized mammals and ravens. The general lack of dismemberment of the carcass indicated that little, if any of the consumption had probably been caused by wolves.

"On the upper portion of the radius-ulna of the right leg was an old, circular-shaped wound that could have been caused by a bite. The wound was swollen and appeared infected. Much of the hair on the inside of the leg had been worn away, as though the animal had been actively licking the area for some time. Undoubtedly, the wound was painful, and probably caused the animal to limp.

"Further examination showed the wolf had been severely bitten about the neck and base of the skull. The neck was disarticulated and the right side of the wing of the atlas bone was splintered. The right tympanic bulla was crushed, and there was a small circular indentation in the bones of the skull along the suture separating the frontal and parietal bones. The nature of the latter was consistent with injuries expected from the bite of another wolf. This indentation had caused severe hemorrhaging in the brain and, in conjunction with dislocation of the axis and atlas vertebrae, was probably the immediate cause of death."

We can speculate a number of things on the evidence. The wolf may no longer have been acceptable to the pack and, in her persistence to remain with them, she was destroyed. Perhaps with her injury she was not able to keep up with the pack.

Alternatively, she may have been the alpha or dominant female of the pack in her declining years who had been challenged by a lower-ranking female. By sectioning a tooth, the age of the dead wolf was determined to be over 12 years. This is extremely old for a wolf in the wild.

During some of the earlier confrontations, she had possibly sustained the leg injury and because of her limp she had become more vulnerable. On this particular instance, she may have been subjected to a full blown attack and killed.

This kill is extraordinary because wolves do not normally fight to the death.

We can only speculate about the event that led to this drama of nature.

CLOSE CALL AT HEART LAKE

Recent events at Heart Lake, a Conservation Authority area and popular angling location north of Brampton, spelled apparent doom for the lake's fish. The die-off of a very large algae population, accompanied by a redistribution of the lake's zooplankton (minute animal life), and an unusual lack of wind created a rare phenomenon. The lake was left with very little or no oxygen for several days. The rainbow trout were the first to be affected and dead or dying trout appeared in the shallows in the hundreds. Brown bullhead, white sucker and largemouth bass showed signs of distress and some began to die. The minnow population concentrated in enormous schools and became easy prey for gulls. Gradually, oxygen returned to the lake, thanks largely to the photosynthetic activity of the algae that had begun to grow. But would the lake still contain fish? To answer this question, two trap nets were set in the lake by a crew from the Ministry of Natural Resources. As the crew lifted the nets, excitement ran high as hundreds of fish thrashed about inside each trap. The lake was far from dead and would still reward anglers.

— R. A. Hester, Maple District



Youths sponsored by Ontario Federation of Anglers and Hunters learn lake inventory techniques during week-long Junior Conservation School.



Don Lillow instructs a class on snowshoeing, a necessary skill for winter visitors.

"WHERE DO FISH GO IN WINTER?" And Other Questions They Ask

*Report and Photos by M. E. Buss, Biology Specialist
The Leslie M. Frost Natural Resources Centre*

IS there a gate on a deer yard? Where do fish go in winter? Do woodpeckers get headaches? To the staff at The Leslie M. Frost Natural Resources Centre, such questions are sometimes the springboards to natural resources education.

The Frost Centre, including the former Ontario Forest Technical School located south of Dorset in the Haliburton Highlands, is catering to a new clientele these days. Once the halls and lecture rooms rang to the sound of young men, many of whom are found in the ranks of the Ministry's technical and administrative staff today.

However, in April of 1974, the facility was rededicated as a public learning institution with the goal of fostering an understanding and appreciation of Ontario's natural resources, their management and use. In addition the Frost Centre has been charged with the responsibility of developing integrated resource planning and man-

agement methods on the 55,000-acre demonstration area.

The goal and present operation of the Frost Centre followed a recommendation by the late Leslie M. Frost, Premier of Ontario from 1946 to 1961, made while he was chairman of the Algonquin Advisory Committee.

The Frost Centre offers residential and day-use resource education programs to both child and adult groups. Clientele hail from many localities in Ontario from Sault Ste. Marie to London, from elementary schools to university classes, from professional to novice outdoorsmen. Many of the groups are environmental science classes from elementary schools in or near the metropolitan areas of southern Ontario.

It is readily apparent after conversing with these groups that urbanization has fostered a generation whose contact with the natural environment has been largely



Young visitors check the product at the maple syrup operation.

through television. The real world of natural resources, their management and use is a concept foreign to the Disney fantasies portrayed by the media.

Students of the Frost Centre study the conditions in a deer yard, measure snow depth and compaction, and examine browse to understand the plight of deer in winter and their adaptations to winter living. The purpose and results of deer range management thereby become real to the student. These "hands-on" activities lead to a true appreciation of the out-of-doors.

The purpose and procedures of lake and stream surveys are explained and demonstrated. The students are given the opportunity to measure the environmental factors which affect fish populations.

Visitors see how the trapping industry operates, learn to identify different furs, and become more fully aware of the complex humane trapping issue. There is still much interest in Canada's oldest business, especially when people discover the distribution, value, numbers and significance of fur-bearers in the wild.

There are also demonstrations in forestry, geology, land management and outdoor recreation conducted by specialists. The

relationships of natural history to the management programs of the Ministry are stressed in all presentations.

Also stressed are the strong interrelationships of resource management activities. For example, a deer yard can be most successfully managed through co-operation between foresters and biologists. Cross-country ski trails, if planned carefully, can provide access for hunters and hikers at other times of the year. If the trails are seeded with grass and clover, they will provide food for deer and grouse and help keep undesirable vegetation from filling in the trail, thus reducing maintenance efforts.

To ensure that groups get the most out of their visit, their leaders or teachers are encouraged to attend a planning session at the Centre before their groups arrive. They learn about the facilities and programs offered by the Centre so they can select activities appropriate to their group's interests and educational needs.

The potential of this 55,000-acre site will be gradually realized as the needs of client groups expand. It is hoped that the realistic approach offered by the Frost Centre will help the public appreciate the complexities of natural resources management.



An active group learns how to operate a pump in forest fire suppression.



A class follows steps in preparing fish for transportation and planting in lakes.

